

REMARKS

Upon entry of this paper, claims 1 and 12 have been amended, claim 6 has been cancelled, and no claims have been added as new claims. Thus, claims 1-5, 7-9, and 12-21 are presently pending in this application. No new matter has been added. The cancellation of claim 6 should in no way be construed to be an acquiescence to any of the rejections stated. Claim 6 is being cancelled solely to expedite the prosecution of the present application. Applicant reserves the option to further prosecute the same or similar claims in the instant or a subsequent patent application.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 6-7, 12-15, and 19-21

Claims 1, 6-7, 12-15, and 19-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tu et al. (U.S. Patent No. 5,016,276) in view of Lentz (U.S. Patent No. 6,036,276). Claims 1 and 12 have been requested to be amended to more clearly describe that which Applicants consider to be their invention. Applicants provide further clarification in the form of the following remarks.

Applicants have requested cancellation claim 6 and incorporation of the contents of claim 6 into independent claims 1 and 12. The language incorporated essentially states that substantially all the nodes forming the microstructure of the membrane are oriented at angle relative to the winding axis of the support structure, the angle being non-parallel (i.e., other than 0°, 360°, 720°, etc.) relative to the winding axis to improve a bond with the first tube to improve bonding with the membrane.

Applicants again direct the Examiner's attention to the specification at page 7, line 30 to page 8, line 3, where it states, "The *nodes 26* forming the microstructure of the membrane 14 *are generally oriented at an angle other than 0° relative to the winding axis A*, i.e., in a direction other than parallel to the winding axis A. *Applicants determined experimentally* that this orientation of the nodes 26 forming the microstructure of the membrane *results in improved*

bonding with the support structure while concomitantly *minimizing delamination* of the support structure 16 during needle puncture.”

Applicants submit that “[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant’s specification, to make the necessary changes in the reference device.” *Ex parte Chicago Rawhide Manufacturing Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)

There is no recognition in Tu of the advantage resulting from the specific orientation of nodes and fibrils in a membrane to improve the bond between the membrane and a subsequently applied support structure. Tu makes no reference to orientation of nodes with regard to bonding a support structure to the PTFE tube. The Examiner was kind enough to identify the only recognition in Tu of node direction, which relates to “expansion” of the extrudate during the manufacturing process of the tubular prosthesis (*see* OA, paragraph 3). This has no bearing on the orientation of nodes in a membrane used in bonding a support structure to a PTFE tube.

There is further evidence that Tu does not teach the provision of a membrane having nodes of specific orientation relative to a wound support structure in that Tu further describes embodiments where the outermost layer is a sprayed on or dipped elastomer polymeric coating, having no indication of a node and fibril structure. The subsequently bonded support structure cannot take advantage of a nodal structure having nodes substantially oriented in a single direction at a selected angle relative to the axis of winding.

The Office Action has combined Tu with Lentz in the above rejection. Lentz is offered to demonstrate the ability to wrap a layer of membrane helically around the tube. However, there is no correlation in Lentz between a wrapped layer of membrane and a subsequently bonded support structure. In fact, in Lentz, the only references to nodes are in the context of determining porosity based on a difference in IND. There is again no disclosure, teaching, or suggestion in Lentz, as with Tu, of configuring the nodes on a membrane wrapped around a tube

in a particular orientation with regard to a subsequently bonded support structure to improve the bond of that support structure (*see* amended claims 1 and 12).

Accordingly, the combination of Tu with Lentz fails to anticipate or make obvious the invention as claimed in the amendment provided herewith. Neither Tu nor Lentz teaches or suggests the configuration of nodal structure as claimed in the amended claims. Specifically, neither Tu nor Lentz teaches or suggests, “substantially all the nodes forming the microstructure of the membrane are oriented at angle relative to the winding axis of the support structure, the angle being non-parallel relative to the winding axis to improve a bond with the first tube to improve bonding with the membrane.” *See* amended claims 1 and 12.

Applicants respectfully submit that claims 1 and 12 are patentable over the cited references. In addition, all pending claims depending from claims 1 and 12 are likewise allowable based at least in part on their dependencies from allowable base claims in addition to their own claimed characteristics. Applicants request entry of the amendment, and reconsideration and withdrawal of this rejection.

Claims 2-3, 5, 8-9, and 18

Claims 2-3, 5, 8-9, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tu in view of Lentz and further in view of Martakos et al. (U.S. Patent No. 5,897,587).

In view of the above, Martakos does not overcome the deficiencies of the combination of Tu and Lentz. The references in combination do not teach or suggest a support structure wound about an exterior surface of a membrane, wherein “substantially all the nodes forming the microstructure of the membrane are oriented at angle relative to the winding axis of the support structure, the angle being non-parallel relative to the winding axis to improve a bond with the first tube to improve bonding with the membrane.” *See* amended claims 1 and 12. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2-3, 5, 8-9, and 18, which depend from allowable base claims, and are further patentable based on their own claimed characteristics.

Claims 16-17

Claims 16-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tu in view of Lentz and in further view of Von Albertini (U.S. Patent No. 4,670,008)

In view of the above, Von Albertini does not overcome the deficiencies of the combination of Tu and Lentz. The references in combination do not teach or suggest a support structure wound about an exterior surface of a membrane, wherein “substantially all the nodes forming the microstructure of the membrane are oriented at angle relative to the winding axis of the support structure, the angle being non-parallel relative to the winding axis to improve a bond with the first tube to improve bonding with the membrane.” See amended claims 1 and 12. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 16-17 which depend from allowable base claims, and are further patentable based on their own claimed characteristics.

CONCLUSION

In view of the foregoing, it is respectfully submitted that this application is now in condition for allowance. Applicants courteously solicit allowance of the claims in the form of a Notice of Allowance. Should there be any further outstanding issues of patentability following the entry of this amendment, a telephone interview is respectfully requested to resolve such issues.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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